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14. ABSTRACT Information with reference to the diagnosis and medical treatment of combat related Post Traumatic Stress Disorder (PTSD) is constantly being updated. Many PTSD related complaints are treated in our medical facilities everyday and this new information is vital to the knowledge base of our providers. This abstract bibliography lists books, web documents, journal articles, and internet sites related to this topic. The majority of items cited date from 2000 to the present. Because of the abundance of articles written, I chose to concentrate my research on information written in the last 6 years. All journal articles cited are available at the CRDAMC Medical Library or from the Internet. The books, web documents and internet sites have call numbers or links at the end of the citation.					
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Diagnosis and Treatment of Combat Related Post-Traumatic Stress Disorder

An Abstract Bibliography

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Journal Articles

Black DW, Carney CP, Peloso PM, Woolson FR, Schwartz DA, Voelker MD, Barrett DH, Doebbeling BN. **"Gulf War veterans with anxiety: prevalence, comorbidity, and risk factors."** *Epidemiology*. 2004 15: 135-142.

BACKGROUND: Veterans of the first Gulf War have higher rates of medical and psychiatric symptoms than nondeployed military personnel. **METHODS:** To assess the prevalence of and risk factors for current anxiety disorders in Gulf War veterans, we administered a structured telephone interview to a population-based sample of 4886 military personnel from Iowa at enlistment. Participants were randomly drawn from Gulf War regular military, Gulf War National Guard/ Reserve, non-Gulf War regular military, and non-Gulf War National Guard/Reserve. Medical and psychiatric conditions were assessed through standardized interviews and questionnaires in 3695 subjects (76% participation). Risk factors were assessed using multivariate logistic regression models. **RESULTS:** Veterans of the first Gulf War reported a markedly higher prevalence of current anxiety disorders than nondeployed military personnel (5.9% vs. 2.8%; odds ratio = 2.1; 95% confidence interval = 1.3-3.1), and their anxiety disorders are associated with co-occurring psychiatric disorders. Posttraumatic stress disorder, panic disorder, and generalized anxiety disorder were each present at rates nearly twice expected. In our multivariate model, predeployment psychiatric treatment and predeployment diagnoses (posttraumatic stress disorder, depression, or anxiety) were independently associated with current anxiety disorder. Participation in Gulf War combat was independently associated with current posttraumatic stress disorder, panic disorder, and generalized anxiety disorder. **CONCLUSIONS:** Current anxiety disorders are relatively frequent in a military population and are more common among Gulf War veterans than nondeployed military personnel. Predeployment psychiatric difficulties are robustly associated with the development of anxiety. Healthcare providers and policymakers need to consider panic disorder and generalized anxiety disorder, in addition to posttraumatic stress disorder, to ensure their proper assessment, treatment, and prevention in veteran populations.

Bleich A, Solomon Z, **"Evaluation of Psychiatric Disability in PTSD of Military Origin."** *The Israel Journal of Psychiatry and Related Sciences*. 2004 41: 268-276.

BACKGROUND: Israeli veterans suffering from post-traumatic stress disorder (PTSD) filed claims for recognition of their mental disability and for compensation underwent thorough psychiatric evaluations conducted by an interdisciplinary team. **OBJECTIVE:** To study the clinical features and functional impairment of PTSD veterans who filed claims for psychiatric disability. To evaluate possible relationships among severity of PTSD, psychiatric comorbidity and level of disability. **METHOD:** Subjects were 294 veterans with PTSD. Evaluation included a semi-structured psychiatric interview; self report questionnaires of PTSD, psychiatric symptoms and assessment of functional impairments (in self-care in daily living, interpersonal--familial and social and occupational functioning). Upon completion of the various assessments the psychiatrist determined a global disability score. **RESULTS:** 156/294 (53%) of the PTSD subjects had psychiatric comorbidity, mainly depression (31%) and anxiety (15%). PTSD casualties suffered significant functional impairments, more in occupational functioning than interpersonal and activities of daily living, respectively. A number of PTSD symptoms were positively correlated with functional impairments in the occupational and interpersonal areas and with the global disability score, while psychiatric comorbidity was not. **CONCLUSION:** PTSD veterans who file for psychiatric disability report severe mental distress and functional impairment, and probably constitute the more severe PTSD casualties. Systematic assessment of functional impairment in addition to clinical examination is needed for valid evaluation of disability and for determining disability score.

Boscarino JA. **"Posttraumatic stress disorder and mortality among U.S. Army veterans 30 years after military service."** *Annals of Epidemiology*. 2006 16: 248-56

PURPOSE: Research suggests that posttraumatic stress disorder (PTSD) may be associated with later medical morbidity. To assess this, we examined all-cause and cause-specific mortality among a national random sample of U.S. Army veterans with and without PTSD after military service. **METHODS:** We used Cox proportional hazards regressions to examine the causes of death among 15,288 male U.S. Army veterans 16 years after completion of a telephone survey, approximately 30 years after their military service. These men were included in a national random sample of veterans from the Vietnam War Era. Our analyses adjusted for race, Army volunteer status, Army entry age, Army discharge status, Army illicit drug abuse, intelligence, age, and, additionally -- for cancer mortality -- pack-years of cigarette smoking. **RESULTS:** Our findings indicated that adjusted postwar mortality for all-cause, cardiovascular, cancer, and external causes of death (including motor vehicle accidents, accidental poisonings, suicides, homicides, injuries of undetermined intent) was associated with PTSD among Vietnam Theater veterans (N = 7,924), with hazards ratios (HRs) of 2.2 (p < 0.001), 1.7 (p = 0.034), 1.9 (p = 0.018), and 2.3 (p = 0.001), respectively. For Vietnam Era veterans with no Vietnam service (N = 7,364), PTSD was associated with all-

cause mortality (HR = 2.0, $p = 0.001$). PTSD-positive era veterans also appeared to have an increase in external-cause mortality as well (HR = 2.2, $p = 0.073$). **CONCLUSIONS:** Our study suggests that Vietnam veterans with PTSD may be at increased risk of death from multiple causes. The reasons for this increased mortality are unclear but may be related to biological, psychological, or behavioral factors associated with PTSD and warrant further investigation.

Boscarino JA. **"Posttraumatic stress disorder and physical illness: results from clinical and epidemiologic studies."** *Annals of the New York Academy of Sciences*. 2004 1032: 141-153.

Research indicates that exposure to traumatic stressors and psychological trauma is widespread. The association of such exposures with posttraumatic stress disorder (PTSD) and other mental health conditions is well known. However, epidemiologic research increasingly suggests that exposure to these events is related to increased health care utilization, adverse health outcomes, the onset of specific diseases, and premature death. To date, studies have linked traumatic stress exposures and PTSD to such conditions as cardiovascular disease, diabetes, gastrointestinal disease, fibromyalgia, chronic fatigue syndrome, musculoskeletal disorders, and other diseases. Evidence linking cardiovascular disease and exposure to psychological trauma is particularly strong and has been found consistently across different populations and stressor events. In addition, clinical studies have suggested the biological pathways through which stressor-induced diseases may be pathologically expressed. In particular, recent studies have implicated the hypothalamic-pituitary-adrenal (HPA) and the sympathetic-adrenal-medullary (SAM) stress axes as key in this pathogenic process, although genetic and behavioral/psychological risk factors cannot be ruled out. Recent findings, indicating that victims of PTSD have higher circulating T-cell lymphocytes and lower cortisol levels, are intriguing and suggest that chronic sufferers of PTSD may be at risk for autoimmune diseases. To test this hypothesis, we assessed the association between chronic PTSD in a national sample of 2,490 Vietnam veterans and the prevalence of common autoimmune diseases, including rheumatoid arthritis, psoriasis, insulin-dependent diabetes, and thyroid disease. Our analyses suggest that chronic PTSD, particularly comorbid PTSD or complex PTSD is associated with all of these conditions. In addition, veterans with comorbid PTSD were more likely to have clinically higher T-cell counts, hyperreactive immune responses on standardized delayed cutaneous hypersensitivity tests, clinically higher immunoglobulin-M levels, and clinically lower dehydroepiandrosterone levels. The latter clinical evidence confirms the presence of biological markers consistent with a broad range of inflammatory disorders, including both cardiovascular and autoimmune diseases.

Boscarino JA. **"Posttraumatic stress disorder, exposure to combat, and lower plasma cortisol among Vietnam veterans: findings and clinical implications."** *Journal of Consulting and Clinical Psychology*. 1996 64: 191-201.

Several clinical studies suggest that individuals with posttraumatic stress disorder (PTSD) experience neuroendocrine system alterations, resulting in significantly lower plasma cortisol. To test this hypothesis, morning serum cortisol was compared among a national sample of Vietnam "theater" veterans ($n = 2,490$) and a sample of Vietnam "era" veterans ($n = 1,972$) without service in Vietnam. Analysis of covariance was used to compare cortisol concentrations after adjusting for 9 covariates (education, income, race, age, smoking status, alcohol use, illicit drug use, medication use, and body mass index). Adjusted cortisol was lower among theater veterans with current PTSD but not era or theater veterans with lifetime PTSD. Among theater veterans, cortisol was inversely related to combat exposure, with veterans exposed to heavy combat having the lowest concentrations. Analysis of plasma cortisol, together with other clinical data, may be instrumental in the future diagnosis and treatment of stress disorders.

Bowman ML. **"Individual differences in posttraumatic distress: problems with the DSM-IV model."** *Canadian journal of psychiatry. Revue canadienne de psychiatrie*. 1999 44: 21-33.

OBJECTIVE: To evaluate the evidence concerning the role of threatening life events in accounting for clinically significant posttraumatic stress responses. **METHOD:** Research was examined to review the epidemiology, evidence of dose-response relations, and individual difference factors in accounting for variations in conditions, including posttraumatic stress disorder, after exposure to threatening events. **RESULTS:** The evidence is significantly discrepant from the clinical Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) model. Greater distress arises from individual differences than from event characteristics. Important individual differences that interact with threat exposures include trait negative affectivity (neuroticism); beliefs about emotions, the self, the world, and the sources and consequences of danger; and prevent acts, disorders, and intelligence. Reasons for the discrepancies between the evidence and the current model of posttraumatic distress are proposed. **CONCLUSION:** In accounting for responses to threatening life events, the relatively minor contribution of event qualities compared with individual differences has significant treatment implications. Treatment approaches assuming that toxic event

exposure creates a posttraumatic disorder fail to consider individual differences that could improve treatment efficacy.

Cavaljuga S, Licanin I, Mulabegovic N, Potkonjak D. **"Therapeutic effects of two antidepressant agents in the treatment of posttraumatic stress disorder (PTSD)."** *Bosnian Journal of Basic Medical Sciences*. 2003 3:12-16.

Posttraumatic stress disorder (PTSD) is a psychiatric disorder characterized by an acute emotional response to a traumatic event or situation involving severe environmental stress (natural disasters, wars, epidemics, rape, assaults, physical torture, catastrophic illness or accident), which may be identified in cognitive, affective or sensory motor activities. The objective was to perform a pilot clinical trial designed to compare the effects of older (tricyclic) and newer "second-generation" (selective inhibitors of serotonin uptake) antidepressants in the treatment of PTSD. A total of 20 hospitalized chronic military combat Bosnian veterans with PTSD symptoms were randomly assigned into two groups of 10 patients each. One group was treated with amitriptyline hydrochloride (AMYZOL) 75 mg/day as a representative of older antidepressants and the other with fluoxetine hydrochloride 60 mg/day (OXETIN) as a representative of newer antidepressants. Those drugs were administered by mouth two or three times-a-day in equally divided doses for at least 8 weeks. Favourable response was achieved in 70% of patients treated with amitriptyline hydrochloride and 60% of patients treated with fluoxetine hydrochloride. Amitriptyline hydrochloride was more effective in the treatment of acute PTSD symptoms (emotional numbing, startle reaction, nightmares, flashbacks, intrusive thoughts, vulnerability, poor impulse control or irritability and explosiveness). Fluoxetine hydrochloride showed a greater efficacy in the treatment of chronic PTSD symptoms (avoidance and numbing symptoms, hyperarousal, nightmares and a feeling of guilt).

Clauw DJ, Engel CC Jr, Aronowitz R, Jones E, Kipen HM, Kroenke K, Ratzan S, Sharpe M, Wessely S. **"Unexplained symptoms after terrorism and war: an expert consensus statement."** *Journal of Occupational and Environmental Medicine*. 2003 45: 1040-1048.

Twelve years of concern regarding a possible "Gulf War syndrome" has now given way to societal concerns of a "World Trade Center syndrome" and efforts to prevent unexplained symptoms following the most recent war in Iraq. These events serve to remind us that unexplained symptoms frequently occur after war and are likely after terrorist attacks. An important social priority is to recognize, define, prevent, and care for individuals with unexplained symptoms after war and related events (eg, terrorism, natural or industrial disasters). An international, multidisciplinary, and multiinstitutional consensus project was completed to summarize current knowledge on unexplained symptoms after terrorism and war.

Cohen H, Kaplan Z, Kotler M, Kouperman I, Moisa R, Grisaru N. **"Repetitive transcranial magnetic stimulation of the right dorsolateral prefrontal cortex in posttraumatic stress disorder: a double-blind, placebo-controlled study."** *American Journal of Psychiatry*. 2004 161: 515-524.

OBJECTIVE: The efficacy of repetitive transcranial magnetic stimulation (rTMS) of the right prefrontal cortex was studied in patients with posttraumatic stress disorder (PTSD) under double-blind, placebo-controlled conditions. **METHOD:** Twenty-four patients with PTSD were randomly assigned to receive rTMS at low frequency (1 Hz) or high frequency (10 Hz) or sham rTMS in a double-blind design. Treatment was administered in 10 daily sessions over 2 weeks. Severity of PTSD, depression, and anxiety were blindly assessed before, during, and after completion of the treatment protocol. **RESULTS:** The 10 daily treatments of 10-Hz rTMS at 80% motor threshold over the right dorsolateral prefrontal cortex had therapeutic effects on PTSD patients. PTSD core symptoms (reexperiencing, avoidance) markedly improved with this treatment. Moreover, high-frequency rTMS over the right dorsolateral prefrontal cortex alleviated anxiety symptoms in PTSD patients. **CONCLUSIONS:** This double-blind, controlled trial suggests that in PTSD patients, 10 daily sessions of right dorsolateral prefrontal rTMS at a frequency of 10 Hz have greater therapeutic effects than slow-frequency or sham stimulation.

Cook JM, Elhai JD, Cassidy EL, Ruzek JI, Ram GD, Sheikh JI. **"Assessment of trauma exposure and post-traumatic stress in long-term care veterans: preliminary data on psychometrics and post-traumatic stress disorder prevalence."** *Military Medicine*. 2006 170: 862-866.

This article reports preliminary data on trauma and post-traumatic stress disorder (PTSD) prevalence, as well as test psychometrics, among 35 cognitively intact veterans residing in long-term care settings. Participants received a traumatic event screening, the Mini-Mental Status Examination, Combat Exposure Scale (CES), PTSD Checklist (PCL), and Mississippi Combat PTSD Scale (M-PTSD). Results demonstrated adequate reliability for the CES, PCL, and M-PTSD for use in these settings, with several significant intercorrelations. A high prevalence of trauma exposure was found, in particular combat. Based on the PCL and M-PTSD, although most veterans did not meet full PTSD diagnostic criteria, a moderate proportion met

partial criteria. The need for assessment and treatment of trauma exposure and PTSD in Veterans Affairs long-term care settings is emphasized.

David, D, De Faria L, Lapeyra O, Mellman T. **"Adjunctive risperidone treatment in combat veterans with chronic PTSD."** *Journal of Clinical Psychopharmacology*. 2004 24(5): 556-558.

The objectives of the current study were (1) to determine whether prominent symptoms of chronic PTSD will show improvement during a 12-week adjunctive risperidone trial, in a group of veterans with only partial response to current pharmacologic treatment; (2) to determine whether PTSD-associated psychotic symptoms respond to risperidone treatment; and (3) to assess the safety and tolerability of risperidone in this population. Twenty male Vietnam combat veterans were recruited through the PTSD program at the Miami Veterans Affairs Medical Center and signed the Veterans Affairs Medical Center institutional review board-approved informed consent. Subjects were included if they (1) met Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition criteria for PTSD as their primary diagnosis; (2) had been only partially responsive to their present pharmacologic treatment, as evidenced by persistent symptoms and functional impairment; (3) were alcohol-free and drug-free for at least 2 months; (4) were medically stable; (5) were on stable doses of other psychotropic medications (antidepressant, anxiolytic, or mood stabilizers) for the past 4 weeks; (6) did not meet current or lifetime diagnostic criteria for a schizophrenia- spectrum disorder or mania; and (7) were not currently taking other antipsychotic medications. In this open-label, 12-week study of adjunctive risperidone in a population of combat veterans with chronic PTSD, who exhibited only partial response to their current treatment, the addition of risperidone resulted in improvement in specific PTSD symptoms and in trauma-related psychotic symptoms. These results must be considered preliminary. Absent a control condition and with ongoing psychosocial interventions, it is not certain that the observed improvements are attributable to risperidone. The subjects, however, had not demonstrated much improvement during their previous treatment, which was held stable, and they represent a group that is often considered to be minimally responsive to therapeutic interventions.

Elhai, JD, Frueh BC, Davis JL, Jacobs GA, Hamner MB. **"Clinical presentations in combat veterans diagnosed with posttraumatic stress disorder."** *Journal of Clinical Psychology*. 2003 59: 385-397.

This article investigated subtypes of symptom patterns among male combat veterans diagnosed with posttraumatic stress disorder (PTSD) through a cluster analysis of their Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Graham, Ben-Porath, Tellegen, Dahlstrom, & Kaemmer, 2001) clinical and validity scales. Participants were 126 veterans seeking outpatient treatment for combat-related PTSD at a Veterans Affairs Medical Center. Two well-fitting MMPI-2 cluster solutions (a four-cluster solution and a three-cluster solution) were evaluated with several statistical methods. A four-cluster solution was determined to best fit the data. Follow-up analyses demonstrated between-cluster differences on MMPI-2 "fake bad" scales and content scales, the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986), Mississippi Combat PTSD scale (M-PTSD; Keane, Caddall, & Taylor, 1988), and Clinician-Administered PTSD Scale (CAPS-1; Blake et al., 1990). Clusters also were different in disability-seeking status, employment status, and income. Implications for research and clinical practice using the MMPI-2 with combat veterans presenting with PTSD are briefly addressed.

Escalona R, Canive J, Calais LA, Davidson JRT. **"Fluvoxamine treatment in veterans with combat-related post-traumatic stress disorder."** *Depression and Anxiety*. 2002 15(1): 29-33.

Investigated the efficacy of the antidepressant fluvoxamine in the treatment of combat-related post-traumatic stress disorder (PTSD). 15 veterans with combat-related PTSD and no other psychiatric diagnosis except depression were recruited to participate in a 14-wk open-label study of fluvoxamine. Patients underwent a 30-day washout period and were rated with the Clinician Administered PTSD Scale (CAPS), Mississippi Scale, Beck Depression Inventory, and Hamilton Rating Scale for Depression and Hamilton Rating Scale for Anxiety at baseline, and every 2 wks until week 14. Three patients stopped fluvoxamine prematurely due to side effects and 7 withdrew consent before completing the 14-wk trial. Eight patients completed at least 8 wks of treatment. The total daily dose of fluvoxamine ranged from 100 to 300 mg with a mean daily dose of 150 mg at week 14. Intent-to-treat analysis revealed a significant improvement in total CAPS scores, and in the intrusion and the avoidance/numbing subscales. The CAPS hyperarousal scores did not change significantly. HAM-A score also improved significantly.

Ford JD, Campbell KA, Storzbach D, Binder LM, Anger WK, Rohlman DS. **"Posttraumatic stress symptomatology is associated with unexplained illness attributed to Persian Gulf War military service."** *Psychosomatic Medicine*. 2001 63: 842-849.

OBJECTIVE: Controversy exists concerning unexplained illness in Persian Gulf War veterans, especially regarding the contribution of psychological trauma. We sought to determine if war zone trauma or posttraumatic stress symptomatology (PTSS) are associated with illnesses reported by Gulf War veterans that were documented by medical examination but not attributable to a medical diagnosis. **METHODS:** A total of 1119 (55% response rate) of 2022 randomly sampled veterans of the United States Persian Gulf War were screened and 237 cases and 113 controls were identified by medical examination for a case-control study comparing Persian Gulf War military veterans with or without medically documented, but unexplained, symptoms. Multivariate logistic regression and cross-validation analyses examined self-report measures of demographics, subjective physical symptoms and functioning, psychiatric symptoms, stressors, war zone trauma, and PTSS, to identify correlates of case-control status. **RESULTS:** Posttraumatic stress symptomatology and somatic complaints were independently associated with case status, as were (although less consistently) war zone trauma and depression. Age, education, and self-reported health, stress-related somatization, pain, energy/fatigue, illness-related functional impairment, recent stressors, and anxiety were univariate (but not multivariate) correlates of case status. **CONCLUSIONS:** PTSS related to war zone trauma warrants additional prospective research study and attention in clinical screening and assessment as a potential contributor to the often debilitating physical health problems experienced by Persian Gulf War veterans.

Foa E, Meadows EA **"Psychosocial treatments for posttraumatic stress disorder: a critical review."** Annual Review of Psychology. 1997 48: 449-480.

Posttraumatic stress disorder (PTSD) has been the subject of growing recognition since its inception in 1980. Owing in part to the relatively recent inclusion of PTSD in the psychiatric nomenclature, research is only beginning to address its treatment in methodologically rigorous studies. In this review, we discuss issues such as prevalence of trauma and of PTSD, and gold standards for treatment outcome research. We then critically review the extant literature on the treatment of PTSD. Finally, we include a discussion of issues specific to various trauma populations and factors that may influence treatment efficacy across types of trauma.

Friedman MJ. **"Posttraumatic stress disorder among military returnees from Afghanistan and Iraq."** American Journal of Psychiatry. 2006 163: 586-593

In posttraumatic stress disorder (PTSD), the normal restraint on the amygdala exerted by the medial prefrontal cortex, especially by the anterior cingulate gyrus and orbitofrontal cortex, is severely disrupted. A comparison of cognitive processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims.

Grinage BD. **"Diagnosis and management of post-traumatic stress disorder."** American Family Physician. 2003 68: 2401-2408.

Although post-traumatic stress disorder (PTSD) is a debilitating anxiety disorder that may cause significant distress and increased use of health resources, the condition often goes undiagnosed. The lifetime prevalence of PTSD in the United States is 8 to 9 percent, and approximately 25 to 30 percent of victims of significant trauma develop PTSD. The emotional and physical symptoms of PTSD occur in three clusters: re-experiencing the trauma, marked avoidance of usual activities, and increased symptoms of arousal. Before a diagnosis of PTSD can be made, the patient's symptoms must significantly disrupt normal activities and last for more than one month. Approximately 80 percent of patients with PTSD have at least one comorbid psychiatric disorder. The most common comorbid disorders include depression, alcohol and drug abuse, and other anxiety disorders. Treatment relies on a multidimensional approach, including supportive patient education, cognitive behavior therapy, and psychopharmacology. Selective serotonin reuptake inhibitors are the mainstay of pharmacologic treatment.

Hertzberg MA, Feldman ME, Beckham JC, Moore SD, Davidson JR. **"Three- to four- year follow-up to an open trial of nefazodone for combat-related posttraumatic stress disorder."** Annals of Clinical Psychiatry. 2002 14: 215-221.

Multiyear (37-51 months) follow-up data was obtained on patients who had participated in an open label trial of nefazodone that originally showed nefazodone may be useful for symptom management in posttraumatic stress disorder (PTSD) patients. Ten patients with combat-related DSM-IV posttraumatic stress disorder (PTSD) entered an open-label 12-week trial of nefazodone, beginning with 100 mg/day and increasing as necessary to achieve a maximal response or until reaching a maximum dosage of 600 mg/day. All 10 patients were followed for over 3-4 years and used nefazodone with dosages of 400-600 mg a day. The entire dosage was shifted to bedtime to facilitate sleep in 7 patients. Data on PTSD

symptoms, depression, sleep, and anger were examined. Nefazodone was well tolerated and no significant changes in sexual function were reported. All participants reported compliance with the prescribed nefazodone over 3-4 years. Nine patients reported that it remained effective, and expressed a desire to remain on the medication. On the basis of clinician global impression ratings (compared to baseline), 10 patients were rated as much improved at 12 weeks. Seven of the 10 patients continued to be much improved, 2 were minimally improved, and 1 was rated as worse (compared to baseline assessment) on 3-4-year follow-up. At 3-4-year follow-up, improvements in PTSD symptoms, sleep, and anger were maintained. These improvements were statistically significant with moderate-to-large effect sizes. These data suggest that clinical improvement in PTSD patients administered nefazodone may be maintained with continued treatment. The medication was tolerated well in long-term treatment, compliance was high, and improvement was maintained over several years. Length of treatment, appropriate dose, long-term efficacy, and compliance are all clinically significant issues with little guiding data available. Controlled studies are needed to (a) further investigate the long-term efficacy of nefazodone in the treatment of PTSD; (b) provide information for length of treatment guidelines; and (c) document if discontinuation is possible and efficacious.

Hoge CW, Castro CA, Messer SC, McGurk D, Cotting DI, Koffman RL. **"Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care."** *The New England Journal of Medicine*. 2004: 351:13-22

BACKGROUND: The current combat operations in Iraq and Afghanistan have involved U.S. military personnel in major ground combat and hazardous security duty. Studies are needed to systematically assess the mental health of members of the armed services who have participated in these operations and to inform policy with regard to the optimal delivery of mental health care to returning veterans. **METHODS:** We studied members of four U.S. combat infantry units (three Army units and one Marine Corps unit) using an anonymous survey that was administered to the subjects either before their deployment to Iraq (n=2530) or three to four months after their return from combat duty in Iraq or Afghanistan (n=3671). The outcomes included major depression, generalized anxiety, and post-traumatic stress disorder (PTSD), which were evaluated on the basis of standardized, self-administered screening instruments. **RESULTS:** Exposure to combat was significantly greater among those who were deployed to Iraq than among those deployed to Afghanistan. The percentage of study subjects whose responses met the screening criteria for major depression, generalized anxiety, or PTSD was significantly higher after duty in Iraq (15.6 to 17.1 percent) than after duty in Afghanistan (11.2 percent) or before deployment to Iraq (9.3 percent); the largest difference was in the rate of PTSD. Of those whose responses were positive for a mental disorder, only 23 to 40 percent sought mental health care. Those whose responses were positive for a mental disorder were twice as likely as those whose responses were negative to report concern about possible stigmatization and other barriers to seeking mental health care. **CONCLUSIONS:** This study provides an initial look at the mental health of members of the Army and the Marine Corps who were involved in combat operations in Iraq and Afghanistan. Our findings indicate that among the study groups there was a significant risk of mental health problems and that the subjects reported important barriers to receiving mental health services, particularly the perception of stigma among those most in need of such care.

Kimble M, Kaufman M. **"Clinical correlates of neurological change in posttraumatic stress disorder: an overview of critical systems."** *Psychiatric Clinics of North America*. 2004 27: 49-65, viii.

Knowledge about the biological basis of psychological trauma is changing at an exponential rate. A PsychINFO search on the search terms "locus coeruleus" and "PTSD" revealed one peer-reviewed journal article between 1982 and 1992 and 51 in the subsequent decade. A similar search revealed zero articles on "hippocampus" and "PTSD" between 1982 and 1992 and 170 in the past decade. As clinicians, it is important to become increasingly familiar with this growing literature to use that knowledge to treat and educate patients. Imagine the relief that can be provided to survivors of trauma if clinicians can tell them that they have a good idea about what causes their symptoms and even clearer ideas about how to treat them. One ancillary but invaluable outcome to this work is the fact that understanding the neurological underpinnings of PTSD will go a long way to establishing a necessary equilibrium in nature and nurture's role in the etiology and maintenance of the disorder. In its early conceptualization, PTSD was thought by many to be an ordinary reaction to an extraordinary event, thus placing responsibility for the disorder firmly in the hands of environmental factors. A subsequent emphasis on vulnerability and resiliency factors in the disorder, however, gave the impression that genetic and potentially hard-wired neurological factors were dominant in the expression of the disorder. Appreciating the balance between nature and nurture in the development of stress disorders like PTSD will allow clinicians and patients alike to appreciate the role of personal responsibility in the process of recovery. A parallel, albeit more mature process, has occurred in the area of schizophrenia in the past four decades. Early conceptualizations of schizophrenia placed a heavy burden on parenting and behavioral factors,

leaving the patients angry at their parents and parents with unnecessary guilt. The later dominance of genetic and biological theories in the disorder allayed parents of their guilt, but left both parents and patients wondering what might be done in the face of such an affliction. Modern theories of schizophrenia seem to have achieved an appropriate balance that recognizes biological vulnerabilities, but also emphasizes familial and patient responsibilities in recovery and care. In PTSD, a similar equilibrium needs to be found, and understanding the neurobiology of the disorder will go far in achieving that goal. When it is understood how trauma affects the brain and how treatment produces neurobiological changes that may remediate trauma-related effects, the patient will be in a better position to make choices about what can and cannot be done in the process of recovery. Giving patients this critical internal locus of control will provide therapeutic benefits such as confidence, self-esteem, and hope that are likely to enhance changes that occur with intervention.

Khouzam HR, el-Gabalawi F, Donnelly NJ. **"The clinical experience of citalopram in the treatment of post-traumatic stress disorder: a report of two Persian Gulf War veterans."** Military Medicine. 2001; 10: 921-923

Objective: To determine the efficacy of the antidepressant citalopram in the treatment of post-traumatic stress disorder (PTSD). METHOD: The cases of two Persian Gulf War veterans are described to illustrate the effects of citalopram in treating their PTSD symptoms. RESULTS: In these two clinical case studies, citalopram led to remission of some of the PTSD symptoms. CONCLUSION: More controlled studies are warranted to further prove the efficacy of citalopram as an agent of choice for the treatment of PTSD.

Lamberg, L. **"Military Psychiatrists Strive to Quell Soldiers' Nightmares of War."** JAMA. 2004 292(13): 1539-1540.

US soldiers serving in Iraq and Afghanistan who seek help for combat stress can receive brief treatment in the field, according to Theodore Nam, MD, chief of inpatient psychiatry at WRAMC, who spoke at the annual meeting of the American Psychiatric Association earlier this year. Treatment, provided with the expectation that soldiers soon will return to their units, includes a few days of regular meals and sleep, counseling, and possibly medication for mild to moderate mood and anxiety disorders. The "PIES" principle--proximity, immediacy, expectancy, simplicity--"aims to conserve the fighting force," Nam said, "without overdiagnosing those who are physically and psychologically drained." Soldiers whose symptoms persist or worsen, he noted, are evacuated for more definitive diagnosis and treatment. A recent study of members of combat infantry units indicated that as many as 17% of those exposed to combat in Iraq and about 11% of those who served in Afghanistan reported symptoms of PTSD, depression, or anxiety. Returning soldiers may be more likely to seek medical than psychiatric help. But those caring for soldiers are well aware that psychological trauma also requires attention. Thus, every soldier evacuated for medical or surgical reasons sees a psychiatrist within 48 hours of arrival at WRAMC. Making such visits universal avoids the stigma associated with a psychiatric evaluation.

Lange JT, Lange CL, Cabaltica RBG. **"Primary care treatment of post-traumatic stress disorder."** American Family Physician. 2000 62: 1025-1040.

Post-traumatic stress disorder, a psychiatric disorder, arises following exposure to perceived life-threatening trauma. Its symptoms can mimic those of anxiety or depressive disorders, but with appropriate screening, the diagnosis is easily made. Current treatment strategies combine patient education; pharmacologic interventions, such as selective serotonin reuptake inhibitors, trazodone and clonidine; and psychotherapy. As soon after the trauma as possible, techniques to prevent the development of post-traumatic stress disorder, such as structured stress debriefings, should be administered. A high index of suspicion for post-traumatic stress disorder is needed in patients with a history of significant trauma.

Lee, Harry A. **"Clinical outcomes of Gulf veterans' medical assessment programme referrals to specialized centers for Gulf veterans with post-traumatic stress disorder."** Military Medicine. 2005 170: 400-405.

The study sought to ascertain whether referring veterans of the 1990-1991 Persian Gulf conflict with chronic post-traumatic stress disorder (PTSD) to specialized centers with a knowledge of military culture and the impact of conflict resulted in successful psychotherapeutic outcomes at 1-year follow-up times. A total of 120 referrals to specialist centers were made by general physicians. Of these, 19 were non-PTSD referrals, and 80 patients were confirmed by a psychiatrist as having PTSD. A degree of success in psychotherapeutic interventions for PTSD at 1 year, determined from general practitioner follow-up

correspondence, was obtained for 95% of referrals. There were no distinguishing features between successful and unsuccessful outcomes. This study shows that early attention, i.e., diagnosis and treatment by psychiatrists knowledgeable regarding the service environment, can be beneficial for this group.

Lyons JA, Caddell JM, Pittman RL, Rawls R, Perrin S. **"The potential for faking on the Mississippi Scale for Combat-Related PTSD."** *Journal of Traumatic Stress*. 1994 7(3): 441-445.

The Mississippi Scale for Combat-Related PTSD is widely used in the assessment of post-traumatic stress disorder (PTSD). The high face-validity of the scale may make it vulnerable to faking, however. The present study found that the scores of individuals instructed to respond "as if" they had PTSD did not differ from the scores of veterans with PTSD. Furthermore, although veterans who were diagnosed as having PTSD were found to have significantly higher Mississippi Scale scores than those who did not meet diagnostic criteria for PTSD, the mean score for all groups (veteran and non-veteran) exceeded the originally recommended diagnostic cut-off score of 107. A cutoff score of 121 was found to best differentiate veterans with PTSD from veterans who did not meet diagnostic criteria for the diagnosis, with high sensitivity but relatively low specificity.

Magruder KM, Frueh BC, Knapp RG, Davis L, Hamner MB, Martin RH, Gold PB, Arana GW. **"Prevalence of posttraumatic stress disorder in Veterans Affairs primary care clinics."** *General Hospital Psychiatry*. 2005 27(3): 169-179.

Although posttraumatic stress disorder (PTSD) is relatively common in community epidemiologic surveys (5-6% for men, 10-12% for women), and psychiatric patients with PTSD are known to have poor functioning and high levels of psychiatric comorbidity, there are no studies that address PTSD prevalence, functioning, and burden in primary care settings. This article reports on (1) the prevalence of PTSD using Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition diagnostic criteria in Veterans Affairs (VA) primary care settings, (2) associated sociodemographic characteristics and comorbidities, (3) functional status related to PTSD, (4) the extent to which PTSD was recognized by providers and (5) health services use patterns (including specialty mental health) of PTSD patients. Patients were randomly selected from those who had an outpatient visit in FY 1999 at one of four VA hospitals; 888 patients consented (74.1% of 1198 contacted); 746 patients (84.0% of consenting patients; 62.3% of contacted patients) were reached for telephone diagnostic interviews. Diagnostic interviews with the Clinician Administered PTSD Scale yielded estimates of current PTSD prevalence of 11.5%. At statistically significant levels, PTSD was positively associated with a variety of comorbid psychiatric disorders, war zone service, age <65 years, not working, less formal education and decreased functioning. Of patients diagnosed with PTSD by study procedures, 12-month medical record review indicated that providers identified only 46.5% and only 47.7% had used mental health specialty services. PTSD-positive [PTSD(+)] patients who used mental health care in the past 12 months were more apt to be identified as having PTSD than nonmental health service users (78.0% vs. 17.8%). Although PTSD (+) patients had more medical record diagnoses than PTSD-negative [PTSD (-)] patients (6.28 vs. 4.95), their use of primary care, urgent care and inpatient care was not different from PTSD (-) patients.

Marinko D, Dragutin K, Basic-Kes V, Seric V, Demarin V. **"Transcranial Doppler sonography for post-traumatic stress disorder."** *Military Medicine*. 2001 166: 955-8

Transcranial Doppler sonography (TCD) was used to examine the mean speed of blood circulation in 50 patients suffering from post-traumatic stress disorder (PTSD). The sonography was repeated 6 months after successful psychiatric treatment. Doppler sonography of Willis's circle blood vessels and vertebrobasilar flow was performed on healthy controls as well. All of the subjects in both groups were 20 to 43 years old and had not suffered from other diseases. Vasospasm of Willis's circle blood vessels was discovered in 62% of PTSD patients, which decreased to 22% after treatment. In the control group, it occurred in 8% of subjects. TCD examination of vertebrobasilar system blood vessels did not identify significant differences in blood circulation mean speed between controls and PTSD patients, regardless of whether they had or had not been treated. This research proved the value of TCD in discovering Willis's circle blood vessel vasospasm in PTSD patients, which suggests the inclusion of TCD in diagnosing PTSD. The value of TCD was affirmed in controlling treatment success, because after 6 months of psychiatric treatment, there were significantly fewer patients with Willis's circle blood vessel vasospasm.

Monnelly EP, Ciraulo DA, Knapp C, Keane T. **"Low-dose risperidone as adjunctive therapy for irritable aggression in posttraumatic stress disorder."** *Journal of Clinical Psychopharmacology*. 2003 23: 193-196.

Increased aggressive behavior can occur in association with posttraumatic stress disorder (PTSD). This study tested the hypothesis that low-dose risperidone reduces aggression and other PTSD-related symptoms in combat veterans. Subjects were male combat veterans with PTSD who scored 20 or higher on

cluster D (hyperarousal) of the Patient Checklist for PTSD-Military Version (PCL-M). Subjects were randomly assigned to either risperidone or placebo treatment groups. Drugs were administered over a 6-week treatment period in a double-blind manner. Subjects received either risperidone (0.5 mg/day; n = 7) or matched placebo (n = 8) tablets during the first 2 weeks of the treatment period. The dose of risperidone could then be increased up to 2.0 mg/day on the basis of response. Prerandomization psychotropic regimens were continued. Subjects were evaluated with the PCL-M and the Overt Aggression Scale-Modified for Outpatients (OAS-M). In comparison with placebo treatment, reductions in scores between baseline and the last week of treatment were significantly greater for OAS-M irritability and PCL-M cluster B (intrusive thoughts) subscales and on the PCL-M total scale. These results suggest that low-dose risperidone administration reduces irritability and intrusive thoughts in combat-related PTSD.

Monson CM, Schnurr PP, Resick PA, Friedman MJ, Young-Xu Y, Stevens SP. **"Cognitive processing therapy for veterans with military-related posttraumatic stress disorder."** *Journal of Consulting & Clinical Psychology*. 2006 74(5): 898-907.

Sixty veterans (54 men, 6 women) with chronic military-related posttraumatic stress disorder (PTSD) participated in a wait-list controlled trial of cognitive processing therapy (CPT). The overall dropout rate was 16.6% (20% from CPT, 13% from waiting list). Random regression analyses of the intention-to-treat sample revealed significant improvements in PTSD and comorbid symptoms in the CPT condition compared with the wait-list condition. Forty percent of the intention-to-treat sample receiving CPT did not meet criteria for a PTSD diagnosis, and 50% had a reliable change in their PTSD symptoms at posttreatment assessment. There was no relationship between PTSD disability status and outcomes. This trial provides some of the most encouraging results of PTSD treatment for veterans with chronic PTSD and supports increased use of cognitive- behavioral treatments in this population.

Neylan TC, Lenoci M, Maglione ML, Rosenlicht NZ, Leykin Y, Metzler TJ, Schoenfeld FB, Marmar CR. **"The effect of nefazodone on subjective and objective sleep quality in posttraumatic stress disorder."** *Journal of Clinical Psychiatry*. 2003 64(4): 445-450.

This study assesses the efficacy of nefazodone treatment (target dose of 400-600 mg/day) on objective and subjective sleep quality in Vietnam combat veterans with chronic DSM-IV posttraumatic stress disorder (PTSD). **METHOD:** Medically healthy male Vietnam theater combat veterans with DSM-IV PTSD (N = 10) completed a 12-week open-label trial. Two nights of ambulatory polysomnography were obtained at baseline and at the end of the trial. PTSD and depressive symptoms and subjective sleep quality were assessed at baseline and after 12 weeks. Data were collected in 1999 and 2000. **RESULTS:** Nefazodone treatment led to a significant decrease in PTSD and depressive symptoms ($p < .05$), an improvement in global subjective sleep quality, and a reduction in nightmares. Nefazodone also resulted in a substantial improvement in objective measures of sleep quality, particularly increased total sleep time, sleep maintenance, and delta sleep as measured by period amplitude analysis. **CONCLUSION:** Nefazodone therapy results in an improvement of both subjective and objective sleep quality in subjects with combat-related PTSD.

Pearn J. **"Traumatic stress disorders: A classification with implications for prevention and management."** *Military Medicine*. 2000 165(6): 434-440.

Management and prevention of acute and post-traumatic stress disorders (PTSDs) are current themes of great importance to the defense health services of many nations. Currently, 2-8% of service members deployed on combat operations, UN peacekeeping tasks, and humanitarian and disaster relief operations present with one or more stress disorders within 3 yrs of deployment. The management of acute stress disorders and the prevention and management of PTSDs necessitate an understanding of the nosology of this group of illnesses. Research into some preventive options--such as critical incident stress debriefing--also necessitates the selection of syndrome-specific Ss during case finding if controversies about the efficacy of such interventions are to be resolved. Diagnostic features, a summary of the nosological evolution, and differential treatment options are presented for 5 acute operational stress disorders (acute combat stress disorder, conversion reactions, the counter-disaster syndrome, peacekeeper's acute stress syndrome, and the Stockholm syndrome) and for 11 post-traumatic disorders, including classic PTSD, chronic fatigue syndrome, Gulf War syndrome, peacekeeper's stress syndrome, survivor's guilt syndrome, and the syndrome of lifestyle and cultural change.

Ramaswamy S, Madaan V, Qadri F, Heaney CJ, North TC, Padala PR, Sattar SP, Petty F. **"A primary care perspective of posttraumatic stress disorder for the Department of Veterans Affairs."** Primary Care Companion to the Journal of Clinical Psychiatry. 2005 7(4): 180-7

Posttraumatic stress disorder (PTSD) is a major mental disorder associated with significant morbidity, psychosocial impairment, and disability. The diagnosis of PTSD can be missed in a primary care setting, as patients frequently present with somatic complaints or depression and are often reluctant to discuss their traumatic experiences. As recent studies of veterans returning from the Gulf War and the Iraqi War suggest high rates of PTSD, the U.S. Department of Veterans Affairs (VA) Hospitals are gearing up to face this challenge. It is important to screen these veterans for symptoms of PTSD and make an appropriate referral if required. In this article, we attempt to review PTSD with a special focus on the VA population. In addition to discussing the epidemiology, diagnosis, and treatment options for PTSD, we also suggest screening questions for both combat-related and military sexual trauma-related PTSD.

Raskind MA, Peskind ER, Kanter ED, Petrie EC, Radant A, Thompson CE, Dobie DJ, Hoff D, Rein RJ, Straits-Troster K, Thomas RG, McFall MM. **"Reduction of nightmares and other PTSD symptoms in combat veterans by prazosin: a placebo-controlled study."** American Journal of Psychiatry. 2003 160: 371-373.

Prazosin is a centrally active alpha (1) adrenergic antagonist. The authors' goal was to evaluate prazosin efficacy for nightmares, sleep disturbance, and overall posttraumatic stress disorder (PTSD) in combat veterans. METHOD: Ten Vietnam combat veterans with chronic PTSD and severe trauma-related nightmares each received prazosin and placebo in a 20-week double-blind crossover protocol. RESULTS: Prazosin (mean dose=9.5 mg/day at bedtime, SD=0.5) was superior to placebo for the three primary outcome measures: scores on the 1) recurrent distressing dreams item and the 2) difficulty falling/staying asleep item of the Clinician-Administered PTSD Scale and 3) change in overall PTSD severity and functional status according to the Clinical Global Impression of change. Total score and symptom cluster scores for reexperiencing, avoidance/numbing, and hyperarousal on the Clinician-Administered PTSD Scale also were significantly more improved in the prazosin condition, and prazosin was well tolerated. CONCLUSIONS: These data support the efficacy of prazosin for nightmares, sleep disturbance, and other PTSD symptoms.

Reeves RR, Parker JD, Konkle-Parker DJ. **"War-related mental health problems of today's veterans: new clinical awareness."** Journal of Psychosocial Nursing and Mental Health Services. 2005 43: 18-28.

Veterans of the military conflicts in Iraq and Afghanistan may have been exposed to significant psychological stressors, resulting in mental and emotional disorders. 2. Posttraumatic stress disorder (PTSD) is characterized by symptoms in three domains: reexperiencing the trauma, avoiding stimuli associated with the trauma, and symptoms of increased autonomic arousal. 3. Treatment of PTSD often requires both psychological and pharmacological interventions. 4. In addition to PTSD, other mental disorders may be precipitated or worsened by exposure to combat, including depression, anxiety, psychosis, and substance abuse

Ritchie EC, Benedek D, Malone R, Carr-Malone R. **"Psychiatry and the military: An update."** Psychiatric Clinics of North America. 2006 29(3): 695-707.

The United States has been a nation and an army at war essentially since September 11, 2001. Not surprisingly, rates of posttraumatic stress disorder (PTSD) and other psychological consequences of combat are increasing. Service members with mental health consequences from impact the military justice and disability systems. To complicate matters, PTSD, although a well-recognized and validated psychiatric disorder, has also long been a disorder associated with malingering, both for the purposes of allegedly avoiding prosecution or punishment and to obtain increased compensation. Mental health professionals' task is further complicated by the "signature wound" in this "global war on terror": traumatic brain injury. There are many causes of head trauma, including blast exposure, gunshot wounds, motor vehicle injury, and other accidents. The severely wounded are routinely screened for head trauma. However, others may simply be knocked unconscious and not present for treatment. They may develop difficulty concentrating or irritability and be misdiagnosed or not receive any medical treatment. Military forensic psychiatrists currently serve in the Army, Navy, and Air Force. Forensic psychiatry in the military has many similarities to forensic psychiatry as practiced in the civilian world, with some key differences. This article accentuates some of the differences, especially those heightened by the global war on terror. It opens with a description of military law and the role of psychiatry in the courts-martial system. The next section deals with the disability system. The article closes with an update on psychological autopsies. A full discussion of the military forensic psychiatry issues and the military legal system is beyond the scope but may be found in other sources. Case examples, which represent composites rather than actual patients, are used to demonstrate the issues.

Ritchie EC, Owens M. **"Military issues."** *Psychiatric Clinics of North America*. 2004 27(3): 459-71.

This article reviews of some of the lessons in trauma psychiatry learned by the US military through wartime and other trauma experiences during the past century. Current practice in the military's employment of stress control teams is reviewed. The military's efforts to prevent and limit psychological casualties, to include the care of battle casualties and prisoners of war (POWs), are addressed. Recent experiences that have informed further, and are shaping the military's approach to managing the psychological aftermath of trauma (such as the Sept. 11, 2001, attack on the Pentagon and the current war with Iraq) are included. Guidelines developed after 9/11, and articulated in the "Mass Violence and Early Intervention" conference are presented. Finally, current ideas on preparation for and intervention after weapons of mass destruction will be outlined.

Robertson M, Humphreys L, Ray R. **"Psychological treatments for posttraumatic stress disorder: recommendations for the clinician based on a review of the literature."** *Journal of Psychiatric Practice*. 2004 10(2): 106-118.

This article reviews available research data supporting the use of psychotherapy in the treatment of posttraumatic stress disorder (PTSD). The authors highlight how this evidence might inform clinical choices in treating PTSD, as well as demonstrating how assumptions based on gaps in the available literature may be misleading. The authors first discuss findings concerning a number of interventions that are commonly used in the treatment of trauma victims or patients with PTSD: critical incident stress debriefing, psychoeducation, exposure therapy, eye movement desensitization reprocessing, stress inoculation therapy, trauma management therapy, cognitive therapy, psychodynamic psychotherapy, and hypnotherapy. They also discuss a number of treatment strategies that have recently been studied in PTSD, including imagery rehearsal, memory structure intervention, interpersonal psychotherapy, and dialectical behavior therapy. PTSD is associated with significant symptomatic morbidity, although desired outcomes in clinical practice are typically related more to reduction in social, interpersonal, and occupational impairment. The most methodologically robust studies, which have typically examined cognitive or behavioral treatments, indicate that psychotherapy helps to relieve symptom severity; however, there is no consistent information about whether these interventions are helpful in improving other domains of impairment and associated disability, even though these problems are often the greatest concern to patients. Nor does the available evidence indicate when, and for whom, various psychotherapeutic interventions should be provided, or whether different modalities of treatment can and should be combined, or sequentially offered, as is often done in specialized treatment programs. Clinicians should keep these issues in mind in reviewing the literature on current (and future) clinical research. Unfortunately, the current evidence base on psychotherapy for PTSD gives only limited guidance concerning clinical choices in managing PTSD. The authors therefore provide some clinical guidelines based on the literature for clinicians treating patients with PTSD.

Rona R J, Hooper R, Greenberg N, Jones M, Wessely S. **"Medical downgrading, self-perception of health, and psychological symptoms in the British Armed Forces."** *Occupational and Environmental Medicine*. 2006 63: 250-254.

OBJECTIVE: To investigate the contribution of psychological symptoms to limited employability for medical reasons in the British Armed Forces. **Methods:** A sample of 4500 military personnel was randomly selected to receive either a full or an abridged questionnaire. The questionnaires asked whether the participant was medically downgraded and if yes, the reason for it. The full questionnaire included the General Health Questionnaire-12 (GHQ-12), the post-traumatic stress disorder (PTSD) checklist, 15 symptoms to assess somatisation, and selected items of the quality of life SF-36 questionnaire. The abridged questionnaire included the GHQ-4, a 14 item PTSD checklist, five symptoms, and the item on self-perception of health from the SF-36. Subjects above a threshold score for GHQ, PTSD, and symptoms were considered to have psychological symptoms. **Results:** 12.4% of the participants were medically downgraded. The majority (70.4%) had social or work limitations. Medically downgraded personnel had higher odds ratios in comparison to non-downgraded personnel for psychological distress 1.84 (95% CI 1.43 to 2.37), PTSD 3.06 (95% CI 1.82 to 5.15), and number of symptoms 2.37 (95% CI 1.62 to 3.47). GHQ, PTSD, and symptoms scores were mainly, but not exclusively, related to chronic physical injury. **Conclusions:** Psychological symptoms are common among medically downgraded personnel. Although the mechanisms involved are unclear, tackling issues of psychological symptoms among these subjects could contribute to faster restitution to full employability in the Armed Forces.

Schnurr PP, Friedman MJ, Engel CC, Foa EB, Shea MT, Resick PM, James KE, Chow BK. **"Issues in the design of multisite clinical trials of psychotherapy: VA Cooperative Study No. 494 as an example."** *Contemporary Clinical Trials*. 2005 59: 626-636.

This article describes issues in the design of an ongoing multisite randomized clinical trial of psychotherapy for treating posttraumatic stress disorder (PTSD) in female veterans and active duty personnel. Research aimed at testing treatments for PTSD in women who have served in the military is especially important due to the high prevalence of PTSD in this population. VA Cooperative Study 494 was designed to enroll 384 participants across 12 sites. Participants are randomly assigned to receive 10 weekly sessions of individual psychotherapy: Prolonged Exposure, a specific cognitive-behavioral therapy protocol for PTSD, or present-centered therapy, a comparison treatment that addresses current interpersonal problems but avoids a trauma focus. PTSD is the primary outcome. Additional outcomes are comorbid problems such as depression and anxiety; psychosocial function and quality of life; physical health status; satisfaction with treatment; and service utilization. Follow-up assessments are conducted at the end of treatment and then 3 and 6 months after treatment. Both treatments are delivered according to a manual. Videotapes of therapy sessions are viewed by experts who provide feedback to therapists throughout the trial to ensure adherence to the treatment manual. Discussion includes issues encountered in multisite psychotherapy trials along with the rationale for our decisions about how we addressed these issues in CSP #494.

Seedat S, Stein DJ, Emsley RA. **"Open trial of citalopram in adults with post-traumatic stress disorder."** *International Journal of Neuropsychopharmacology*. 2000 3(2): 135-140.

Citalopram, a selective serotonin reuptake inhibitor (SSRI) with highly potent and selective serotonin reuptake inhibition, may be a useful agent for treating the intrusive, avoidance, and arousal symptoms that characterize posttraumatic stress disorder (PTSD). 14 Ss with PTSD (aged 20-52 yrs) were entered into an 8 wk, open-label, fixed-dose trial of citalopram, commencing with 20 mg/d, and increasing to 40 mg/d after 2 weeks. 11 Ss completed the 8 week treatment and were included in the data analysis. Based on the Clinician-Administered Post-traumatic Stress Disorder Scale (CAPS-2), there was significant reduction in all core PTSD symptoms (re-experiencing, hyperarousal, and avoidance) by week 8. Nine of the 11 completers were classified as 'responders' on Clinical Global Impression Improvement scores. Secondary measures of depression and anxiety also improved significantly by week 8. Citalopram was tolerated well, and there were no dropouts due to adverse effects. Data from this preliminary open trial suggests that citalopram may be effective for reducing the key symptoms of PTSD, however, these findings need confirmation in double-blind, placebo-controlled trials.

Stein DJ, Seedat S, van der Linden GJH, Zungu-Dirwayi N. **"Selective serotonin reuptake inhibitors in the treatment of post-traumatic stress disorder: A meta-analysis of randomized controlled trials."** *International Clinical Psychopharmacology*. 2000 15 (Supplement 2): S31-S39.

Examines the diagnosis, assessment, and neurobiology of posttraumatic stress disorder (PTSD) and presents a meta-analysis of trials of the selective serotonin reuptake inhibitors (SSRIs) in PTSD. Studies of the pharmacotherapy of PTSD were identified using methods developed by the Cochrane collaboration. Although a range of open trials of different SSRIs in PTSD show promise, there are few controlled pharmacotherapy studies in this disorder. Nevertheless, pharmacotherapy for PTSD appears to have reasonable robust effects, with odds ratios for responder status, defined as 'much improved' or 'very much improved' on the Clinical Global Impression Scale, on drug vs. placebo varying from 2.2 to 5.6 in randomized controlled trials of different agents. The SSRIs appear both safe and effective for this indication. Additional research with these agents is necessary to clarify many questions, including predictors of response, duration of treatment, comparison with other agents, and integration with psychotherapy. In the interim, however, the SSRIs can be recommended as a first-line medication for the treatment of PTSD.

Stein DJ, Bandelow B, Hollander E, Nutt DJ, Okasha A, Pollac MH, Swinson RP, Zohar J. **"WCA recommendations for long-term treatment of posttraumatic stress disorder."** *CNS Spectrums*. 2003 8 (Supplement 1): 31-39.

Posttraumatic stress disorder (PTSD) is a common and disabling condition. In addition to combat-related PTSD, the disorder occurs in civilians exposed to severe traumatic events, with the community prevalence rate for the combined populations reaching as high as 12%. If left untreated, PTSD may continue for years after the **stressor** event, resulting in severe functional and emotional impairment and a dramatic reduction in quality of life, with negative economic consequences for both the sufferer and society as a whole. Although PTSD is often overlooked, diagnosis is relatively straightforward once a triggering stressor event and the triad of persistent symptoms--reexperiencing the traumatic event, avoiding stimuli associated with

the trauma, and hyperarousal--have been identified. However, comorbid conditions of anxiety and depression frequently hamper accurate diagnosis. Treatment for PTSD includes psychotherapy and pharmacotherapy. The latter includes selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, and monoamine oxidase inhibitors. Only SSRIs have been proven effective and safe in long-term randomized controlled trials. Current guidelines from the Expert Consensus Panel for PTSD recommend treatment of chronic PTSD for a minimum of 12-24 months.

Stevenson VE, Chemtob CM. **"Premature treatment termination by angry patients with combat-related post-traumatic stress disorder."** Military Medicine. 2000 165(5): 422-424.

Presents a case study of premature termination of treatment by a patient with conjoined combat-related posttraumatic stress disorder (PTSD) and extreme anger. A male (aged 30 yrs) had been physically abused by his Vietnam-veteran father, was a Gulf War-era veteran who had killed enemy soldiers in a firefight, lost friends in combat, and had been injured in a mortar explosion. He joined a law enforcement agency after military discharge where he showed a propensity to use excessive violence that eventually led to dismissal. The S sought help from the VA which diagnosed PTSD and intermittent explosive disorder. In a fashion similar to other patients with conjoined PTSD, the S directed his anger at the therapist during the course of treatment, which compromised the treatment alliance and resulted in premature termination of treatment. It is concluded that a therapeutic strategy of including the spouse and other family members in the treatment engagement process may prevent premature treatment termination by a healthy triangulation of therapist and spouse as allies to offset the patient's anger-related treatment avoidance.

Sugar Max. **"Late Adolescence and Combat PTSD."** Adolescent Psychiatry. 2003 27: 307-321.

Focuses on the methods used to combat stress-related syndromes of war veterans in the U.S. Rates of combat reactions in lower ranks (OR) and officers; Long-term effects of combat stress; Selection criteria for officers and OR combatants.

Sugar Max. **"Warrior Identity Problem"** Adolescent Psychiatry. 2004 28: 279-295.

This article proposes warrior identity problem (WIP) as a new diagnostic category and subcategory of identity problem. It occurs among late adolescents in the military who have identity problem, and it is a solution to the identity problem. WIP has special significance for adolescent and military psychiatry because most military personnel are late adolescents or young adults. Differential diagnosis should rule out personality disorders. WIP often has a comorbid diagnosis such as substance abuse, major depression or combat PTSD.

Sutker PB, Uddo M, Brailey K, Allain AN, Errera P. **"Psychological symptoms and psychiatric diagnoses in Operation Desert Storm troops serving graves registration duty."** Journal of Traumatic Stress. 1994 7: 159-171.

Early psychopathology outcomes were compared in troops mobilized for Persian Gulf graves registration duty but differentiated by war-zone deployment. Constructs of interest were Axis I psychiatric disorders, particularly posttraumatic stress disorder (PTSD), negative affect states, and somatic complaints. Psychometric instruments, including the Structured Clinical Interview for DSM-III-R, were administered to troops attending drill exercises. Although similar in personal characteristics and reporting low rates of premorbid psychopathology, groups differed in the prevalence of PTSD diagnoses, anxiety and anger symptoms, and somatic complaints. Current and lifetime PTSD rates of 48% and 65%, respectively, suggest that the psychological aftermath of war-zone participation involving the gruesome task of handling human remains was profound.

Thompson KE, Vasterling JJ, Benotsch EG, Brailey K, Constans J, Uddo M, Sutker PB. **"Early symptom predictors of chronic distress in Gulf War veterans."** Journal of Nervous and Mental Disease. 2004 192: 146-152.

Although there is evidence that specific early hyperarousal, avoidance, and emotional numbing symptoms are associated with later posttraumatic stress disorder (PTSD) symptomatology among veterans, little is known about predictors of later non-PTSD-related psychological symptoms. One and 2 years after serving in the Gulf War, 348 military reservists were assessed for severity of war zone stress, PTSD, psychological distress, and stress-mediated physical complaints. Overall PTSD symptomatology and emotional numbing and hyperarousal symptom clusters increased over time, whereas re-experiencing and avoidance symptoms showed no change. Emotional numbing and hyperarousal symptoms at 1 year predicted

generalized distress, depression, anxiety, hostility, and somatic symptoms at 2 years, whereas re-experiencing and avoidance symptoms did not. Findings highlight the importance of targeting early emotional numbing and hyperarousal symptom clusters to reduce longer-term psychological distress.

Vieweg WV, Julius DA, Fernandez A, Beatty-Brooks M, Hetterna JM, Pandurangi AK. **"Posttraumatic stress disorder: clinical features, pathophysiology, and treatment."** *The American Journal of Medicine*. 2006 119(5): 383-390.

Posttraumatic stress disorder (PTSD), classified as an anxiety disorder, has become increasingly important because of wars overseas, natural disasters, and domestic violence. After trauma exposes the victim to actual or threatened death or serious injury, 3 dimensions of PTSD unfold: (1) reexperiencing the event with distressing recollections, dreams, flashbacks, and/or psychologic and physical distress; (2) persistent avoidance of stimuli that might invite memories or experiences of the trauma; and (3) increased arousal. Traumatic events sufficient to produce PTSD in susceptible subjects may reach a lifetime prevalence of 50% to 90%. The actual lifetime prevalence of PTSD among US citizens is approximately 8%, with the clinical course driven by pathophysiologic changes in the amygdala and hippocampus. Comorbid depression and other anxiety disorders are common. General principles of treatment include the immediate management of PTSD symptoms and signs; management of any trauma-related comorbid conditions; nonpharmacologic interventions including cognitive behavioral treatment; and psychopharmacologic agents including antidepressants (selective serotonin reuptake inhibitors most commonly), antianxiety medications, mood stabilizing drugs, and antipsychotics. This review of PTSD will provide the reader with a clearer understanding of this condition, an increased capacity to recognize and treat this syndrome, and a greater appreciation for the role of the internist in PTSD.

Vuksic-Mihaljevic Z, Bensic M, Begic D, Lauc G, Hutinec B, Candrljic V, Todorovic V. **"Combat-related posttraumatic stress disorder among Croatian veterans: The causal models of symptom clusters."** *European Journal of Psychiatry*. 2004 18(4): 197-208.

Objective: This study investigated the etiological roles of premilitary risk factors, military entry conditions, war zone experiences, dissociative reactions, and homecoming reception in the development of chronic posttraumatic stress disorder symptom clusters among Croatian veterans. Methods: 150 Croatian war veterans with the diagnosis of chronic combat-related PTSD, who sought treatment at the Department of Psychiatry Osijek, Croatia, and who provided complete data, were selected as the sample for this study from the treatment-seeking group of the ex-soldier populations (N = 192). Structural equation modeling was used to develop an etiological model of relationships of premilitary risk factors, military entry conditions, war zone experiences, dissociative reactions, and homecoming reception with current PTSD symptom clusters. Results: The causal models with satisfactory fit and parsimony were developed. The result analysis suggests that there is a different etiological effect of studied variables on PTSD symptom clusters in all three studied models. War zone experiences, peritraumatic dissociation and homecoming reception have a higher and primary etiological effect in relation to a lower and secondary etiological effect of premilitary risk factors and military entry conditions in all three studied models. The exception is sometimes a higher etiological effect of premilitary risk factors in the causal model for the avoidance symptom cluster and military entry conditions in the causal model for the arousal cluster. Conclusions: The results may support study hypothesis that all PTSD symptoms do not have the same etiology and that a different hierarchy of etiological influence exists among studied variables in all three constructed models of PTSD symptom clusters.

Zohar J, Amital D, Miodownik C, Kotler M, Bleich A, Lane RM, Austin C. **"Double-blind placebo-controlled pilot study of sertraline in military veterans with posttraumatic stress disorder."** *Journal of Clinical Psychopharmacology*. 2002 22(2): 190-195.

The efficacy of sertraline in the treatment of civilian posttraumatic stress disorder (PTSD) has been established by two large placebo-controlled trials. The purpose of the current pilot study was to obtain preliminary evidence of the efficacy of sertraline in military veterans suffering from PTSD. Outpatient Israeli military veterans with a DSM-III-R diagnosis of PTSD were randomized to 10 weeks of double-blind treatment with sertraline (50-200 mg/day; N = 23, 83% male, mean age = 41 years) or placebo (N = 19, 95% male, mean age = 38 years). Efficacy was evaluated by the Clinician-Administered PTSD Scale (CAPS-2) and by Clinical Global Impression Scale-Severity (CGI-S) and -Improvement (CGI-I) ratings. Consensus responder criteria consisted of a 30% or greater reduction in the CAPS-2 total severity score and a CGI-I rating of "much" or "very much" improved. The baseline CAPS-2 total severity score was 94.3 +/- 12.9 for sertraline patients, which is notably higher than that reported for most studies of civilian PTSD. On an intent-to-treat endpoint analysis, sertraline showed a numeric but not statistically significant

advantage compared with placebo on the CAPS-2 total severity and symptom cluster scores. In the study completer analysis, the mean CGI-I score was 2.4 +/- 0.3 for sertraline and 3.4 +/- 0.3 for placebo ($t = 2.55$, $df = 30$, $p = 0.016$), CGI-I responder rates were 53% for sertraline and 20% for placebo ($\chi^2 = 3.62$, $df = 1$, $p = 0.057$), and combined CGI-I and CAPS-2 responder rates ($\geq 30\%$ reduction in baseline CAPS-2 score) were 41% for sertraline and 20% for placebo ($\chi^2 = 1.39$, $df = 1$, $p = 0.238$). Sertraline treatment was well tolerated, with a 13% discontinuation rate as a result of adverse events. This pilot study suggests that sertraline may be an effective treatment in patients with predominantly combat-induced PTSD, although the effect size seems to be somewhat smaller than what has been reported in civilian PTSD studies. Adequately powered studies are needed to confirm these results and to assess whether continued treatment maintains or further improves response.

BOOKS, INTERNET SITES and WEB DOCUMENTS

Center for the Study of Traumatic Stress. Uniformed Services University of the Health Sciences. 04 Oct 2006. <<http://www.centerforthestudyoftraumaticstress.org/home.shtml>>. Internet

The Center for the Study of Traumatic Stress conducts research, education, consultation and training on preparing for and responding to the psychological effects and health consequences of traumatic events. These events include natural (hurricanes, floods and tsunami) and human made disasters (motor vehicle and plane crashes, war, terrorism and bioterrorism). The Center's work spans studies of genetic vulnerability to stress, individual and community responses to terrorism, and policy recommendations to help our nation and its military and civilian populations.

Darves, Bonnie. "Facing new challenges of PTSD". July-Aug 2006. ACP Observer. 04 Oct 2006. <<http://www.acponline.org/journals/news/july06/ptsd.htm>>. Internet

As combat veterans seek care, internists need to know how to screen and treat

Defense Technical Information Center (DTIC®). "An Immersive Virtual Reality Therapy Application for Iraq War Veterans with PTSD: From Training to Toy to Treatment". 04 Oct 2006. <<http://stinet.dtic.mil/cgi-bin/GetTRDoc?AD=ADA432098&Location=U2&doc=GetTRDoc.pdf>> Internet.

Post Traumatic Stress Disorder (PTSD) is reported to be caused by traumatic events that are outside the range of usual human experiences including (but not limited to) military combat, violent personal assault, being kidnapped or taken hostage and terrorist attacks. Initial data suggests that 1 out of 6 Iraq War veterans are exhibiting symptoms of depression, anxiety and PTSD. Virtual Reality (VR) exposure treatment has been used in previous treatments of PTSD patients with reports of positive outcomes. The aim of the current paper is to briefly describe the rationale, design and development of an Iraq War PTSD VR therapy application created from assets that were initially developed for a combat tactical training simulation, which then served as the inspiration for the X-Box game entitled *Full Spectrum Warrior*.

Defense Technical Information Center (DTIC®). "Prevalence and Screening of Mental Health Problems Among U.S. Combat Soldiers Pre- and Post- Deployment". 04 Oct 2006. <<http://handle.dtic.mil/100.2/ADA433449>>. Internet

Mental disorders are some of the most common and disabling medical conditions among military service members. Deployment, particularly to combat zones, has been associated with a variety of mental health, social, and occupational effects, including PTSD (15-40% lifetime rate after combat), depression, substance abuse, job loss, unemployment, divorce, and spouse abuse. To better provide early intervention for mental health problems, the U.S. military has been conducting routine psychological screening since 1996 before and after operational deployments, and has included mental health screening in the post deployment health assessment mandated for troops returning from Afghanistan and Iraq. Despite these efforts, little research has been done to determine the prevalence of mental health problems among combat / operational units, the validity and benefits / risks of screening, or the optimal delivery of mental health services.

Foa, Edna B., Keane Terence M., and Friedman, Matthew J., eds. **Effective Treatments for PTSD**. New York: The Guilford Press, 2000. 388pp. (WM170 E269 2000)

This acclaimed volume brings together leading clinical scientists to offer best-practice guidelines for the treatment of PTSD. Developed under the auspices of the PTSD Treatment Guidelines Task Force of the

International Society for Traumatic Stress Studies, the book evaluates the efficacy of established and emerging approaches for intervening with adults, adolescents, and children. Paired chapters on each approach thoroughly review the scientific literature; evaluate the strength of the research evidence, including standardized ratings; provide detailed descriptions of therapeutic methods and procedures; and discuss special considerations in treatment.

Follette, Victoria M., Ruzek, Josef I. eds. **Cognitive-Behavioral Therapies for Trauma**. New York: The Guilford Press, 2006. 472pp. (WM170 C676 2006)

This important volume brings together leading clinicians and researchers to present cognitive-behavioral approaches to treating PTSD and other trauma-related symptoms and disorders. Solidly grounded in the latest theory and research, chapters describe pragmatic, clinician-friendly strategies for working with problems that are prevalent across a variety of trauma experiences, including intrusion and arousal, guilt, anger, substance abuse, dissociation, and relationship issues. Readers gain a deeper understanding of the goals and methods of trauma education, therapeutic exposure, stress management training, cognitive reprocessing, and other interventions, and learn techniques for defusing negative self-talk, working with traumatic memories, and helping clients develop new trauma narratives. Throughout, the volume emphasizes the importance of situating symptomatic thoughts, feelings, and behaviors in their interpersonal and environmental contexts, instead of focusing on trauma history alone or viewing clients through a lens of individual dysfunction.

Gulflink. July 26, 2005. **"A Comparison of PTSD Symptomatology among Three Army Medical Units Involved in ODS"** 04 Oct 2006 < <http://www.gulflink.osd.mil/medical/a-105.htm>. > Internet.

OVERALL PROJECT OBJECTIVE: The objective of the study was to compare three Arizona Reserve Medical Units involved in Operation Desert Storm on PTSD symptomatology one year after the war utilizing the revised Mississippi Scale for Combat-Related PTSD (Keane, Caddell, and Taylor, 1988). One of the groups was deployed to Saudi Arabia (N=42), one to England (N=37), and one to Arizona (N=17). SPECIFIC AIMS: The hypothesis was that the group deployed to Saudi Arabia would have significantly higher scores than the other two groups.

Kemerling, Rachel, Ouimete, Paige, and Wolfe, Jessica., eds. **Gender and PTSD**. New York: The Guilford Press, 2002. 460pp. (WM170 G325 2002)

Current research and clinical observations suggest pronounced gender-based differences in the ways people respond to traumatic events. Most notably, women evidence twice the rate of PTSD as men following traumatic exposure. This important volume brings together leading clinical scientists to analyze the current state of knowledge on gender and PTSD. Cogent findings are presented on gender-based differences and influences in such areas as trauma exposure, risk factors, cognitive and physiological processes, comorbidity, and treatment response. Going beyond simply cataloging gender-related data, the book explores how the research can guide us in developing more effective clinical services for both women and men. Incorporating cognitive, biological, physiological, and sociocultural perspectives, this is an essential sourcebook and text.

Litz, Brett T. ed. **Early Intervention for Trauma and Traumatic Loss**. New York: The Guilford Press, 2004. 338pp. (WM170 E12 2004)

This authoritative volume describes the state of the science of early intervention for trauma and traumatic loss across the lifespan and in a variety of contexts. While few would dispute the importance of helping people cope with severe life stressors, important questions remain about how to identify those at risk for chronic problems and which interventions actually facilitate recovery over time. Following a review of current knowledge on the predictors and course of acute stress disorder, PTSD, and traumatic grief, the volume presents a range of early intervention models designed for very young children, older children, and adults. Authors examine the empirical literature and recommend evidence-based clinical strategies whenever possible, while delineating an extensive agenda for future research. Also covered are the lessons learned from early intervention with specific populations: 9/11 survivors, combat veterans, emergency services personnel, survivors of sexual violence, and others.

Schnurr, Paula P., Cozza, Stephen J., eds. **"Iraq War Clinician Guide"**, 2 ed. Washington DC: Department of Veterans Affairs. 2004. 209pp. 04 Oct 2006. < <http://www.ncptsd.va.gov/war/guide/index.html>>. Internet.

The Iraq War Clinician Guide was developed by members of the National Center for PTSD and the Department of Defense. It was developed specifically for clinicians and addresses the unique needs of veterans of the Iraq war.

United States Department of Veterans Affairs. 11 September 2006. Office of Quality and Performance (OQP). **"Post Traumatic Stress Disorder Clinical Practice Guidelines"**. 5 October 2006. <http://www.oqp.med.va.gov/cpg/PTSD/PTSD_Base.htm>. Internet.

The Post -Traumatic Stress Guideline was developed by and written for clinicians by the Department of Veterans Affairs (VA), Department of Defense (DoD). The guideline draws from other evidence based guidelines that were available to the Working Group: Effective Treatments for PTSD: Practice Guidelines from the International Society for Traumatic Stress Studies. Foa EB, Keane TM, Friedman MJ (Eds) 2000; The Expert Consensus Guideline Series: Treatment of Posttraumatic Stress Disorder. Foa EB, et al., 1999; and the Mental Health and Mass Violence: Evidenced-Based Early Psychological Intervention for Victims/Survivors of Mass Violence. A Workshop to Reach Consensus on Best Practices. National Institute of Mental Health 2002. NIH Publication No. 02-5138. Washington, D.C.: U.S. Government Printing Office. (www.nimh.nih.gov/research/massviolence.pdf) While designed for use by primary care providers in an ambulatory care setting, the modules can also be used to coordinate and standardize care within subspecialty teams and as teaching tools for students and house staff.

United States Government Accountability Office. **"Post-Traumatic Stress Disorder: DOD Needs to Identify the Factors Its Providers Use to Make Mental Health Evaluation Referrals for Servicemembers"**. 04 Oct 2006. <<http://www.gao.gov/new.items/d06397.pdf>>. Internet

Many servicemembers supporting Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) have engaged in intense and prolonged combat, which research has shown to be strongly associated with the risk of developing post-traumatic stress disorder (PTSD). GAO, in response to the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, (1) describes DOD's extended health care benefit and VA's health care services for OEF/OIF veterans; (2) analyzes DOD data to determine the number of OEF/OIF servicemembers who may be at risk for PTSD and the number referred for further mental health evaluations; and (3) examines whether DOD can provide reasonable assurance that OEF/OIF servicemembers who need further mental health evaluations receive referrals.

Van der Kolk, Bessel A., McFarlane, Alexander C., and Weisaeth, Lars, eds. **Traumatic Stress**. New York: The Guilford Press, 1996. 596pp. (WM170 T217t 1996)

Featuring contributions from the world's leading experts, this integrated work summarizes the current state of our knowledge about the ways people deal with extreme stress, and the ways in which professionals can help them recover.

Vasterling, Jennifer J., Brewin, Chris R., eds. **Neuropsychology of PTSD**. New York: The Guilford Press, 2005. 339pp. (WM170 N4922 2005)

Synthesizing the breadth of current knowledge on the effects of psychological trauma on the brain, this volume integrates neurobiological, clinical, and cognitive aspects of PTSD. Presented is cutting-edge research - including recent advances in functional neuroimaging - on the emergence of neuropsychological dysfunctions in specific trauma populations: children, adults, older adults, and victims of closed head injury. The coverage encompasses a range of chronic problems with memory, attention, and information processing that is related to trauma exposure. Linking neuropsychological findings to the realities of clinical practice, the concluding section addresses key implications for PTSD assessment and for pharmacological and psychological treatment.

Wilson, John P., Keane, Terence M., eds. **Assessing Psychological Trauma and PTSD**. New York: The Guilford Press, 2004. 668pp. (WM170 A846 2004)

From prominent authorities in the field, the revised and expanded second edition of this acclaimed work is an essential resource for anyone providing treatment services or conducting research in the area of trauma and PTSD. The volume reviews the breadth of current knowledge about trauma assessment and provides clear, up-to-date recommendations for practice. Coverage encompasses the uses of standardized measures, clinical procedures, epidemiological methods, and projective techniques, as well as approaches to evaluating specific survivor populations. Existing chapters have been fully rewritten and seven entirely

new chapters added, addressing recent developments in classification; emerging applications of neuroimaging and pharmacological probes; legal and forensic issues in assessment; assessment of comorbid PTSD and substance abuse; and effects of trauma on physical health.

Wilson, John P., Friedman, Matthew J., and Lindy, Jacob D., eds. **Treating Psychological Trauma & PTSD**. New York: The Guilford Press, 2001. 467 pp. (WM170 T78465 2001)

Much has been learned about PTSD in recent decades, yet many questions remain about the complex pathways by which trauma disrupts people's lives. This authoritative volume presents an innovative psychobiological framework to help clinicians and researchers better understand the myriad difficulties facing patients and navigate the array of available intervention approaches. Incorporating cutting edge theory and clinical research, the book provides a crucial reformulation of diagnostic criteria and treatment goals. It then brings together leading treatment experts to describe and illustrate their respective approaches, facilitating the selection and implementation of the most effective interventions for individual patients.

Wilson, John P., Lindy, Jacob D., eds. **Countertransference in the Treatment of PTSD**. New York: The Guilford Press, 1994. 406pp. (WM170 C855 1994)

It is now widely recognized that mental health professionals who work with trauma victims are themselves at risk for powerful countertransference reactions (CTRs), vicarious victimization, and stress-related "burnout." This volume is the first book in the field of traumatic stress studies to systematically examine the unique role of countertransference processes in psychotherapy outcome. Emphasizing the need for carefully deliberated action, this volume offers vital new insights into the victim-healer relationship and presents detailed techniques to promote awareness of affective reactions for anyone working with sufferers of PTSD and its comorbid conditions such as anxiety, depression, and substance abuse. Part I introduces readers to theoretical and conceptual foundations of countertransference in post-traumatic therapies. Illustrated with case examples, the relationship of empathic strain to countertransference and two types of therapist defenses are examined. Chapters in Part II discuss countertransference issues that arise in the treatment of victims of sexual, physical, and emotional abuse, including survivors of rape and early childhood trauma; children traumatized by urban violence; patients with multiple personality disorder; and acutely traumatized children. Part III examines therapists' reactions in work with victims of war trauma, civil violence, and political oppression, as well as other groups whose trauma must be understood in specific cultural and historical context. Explicit examples of avoidant and over identification responses are presented. Finally, Part IV expands the discussion of trauma and countertransference to survivors of both direct and indirect trauma, such as that of rescue workers who, during natural disasters, are exposed to the threat of the disaster and the plight of those they attempt to help. Throughout, case vignettes illustrate the signs and symptoms of trauma-specific CTRs as they unfold during treatment. The roles through which clinicians can successfully engage survivors are also detailed. Rich with explicit suggestions for providing compassionate and intelligent care, this insightful volume is ideal for psychotherapists, psychologists, and other mental health professionals working with people suffering from PTSD. Similarly, "Countertransference in the Treatment of PTSD" is a valuable classroom text for courses dealing with the treatment of trauma victims and its implications for psychotherapists.

Williams, Mary Beth, Sommer, John F. Jr., eds. **Simple and Complex Post-Traumatic Stress Disorder: Strategies for Comprehensive Treatment in Clinical Practice**. New York: The Haworth Maltreatment and Trauma Press, 2002. 408pp. (WM170 S612 2002)

This unique book, by the authors of the classic Handbook of Post-Traumatic Therapy, provides the "how to" of clinical practice techniques in a variety of settings with a variety of clients. Simple and Complex Post-Traumatic Stress Disorder: Strategies for Comprehensive Treatment in Clinical Practice delivers state-of-the-art techniques and information to help traumatized individuals, groups, families, and communities. From critical incident debriefing to treating combat veterans with longstanding trauma, it covers the full spectrum of PTSD clients and effective treatments.

Yehuda, Rachel, ed. **Risk Factors for Posttraumatic Stress Disorder**. Washington DC: The American Psychiatric Press, Inc. 1999. 250pp. (WM170 R595 1999).

Discusses strategies for assessing risk and compiles findings for identifying risk factors related to demographics, environmental, genetic, and biological factors. Examines risk factors through twin studies, and neurobiological risk factors and family influences on PTSD.